

## **Holding and Dispensing Apparatus**

### **Field of Invention**

The present invention relates to a beverage pack and, more particularly, to a holding and dispensing apparatus for use with a beverage pack.

### **Background of Invention**

Referring to Figure 7, a conventional pack 90 includes a top 92, an aperture 93 defined in the top 92 and a lid 91 attached to the top 92 in order to seal the aperture 93. The lid 91 can be lifted so that beverage can be poured from the pack 90 through the aperture 93. However, the beverage cannot be poured smoothly because of the air pressure tends to seal the single aperture 93. As a result, the beverage can be spilt. In addition, moisture sticks to the pack 90 when it is taken from a refrigerator. In this case, the pack 90 becomes slippery and can be dropped easily.

The present invention is therefore intended to obviate or at least alleviate the problems encountered in prior art.

### **Summary of Invention**

It is the primary objective of the present invention to provide a holding and dispensing apparatus for use with a pack.

According to the present invention, a holding and dispensing apparatus is provided for use with a pack. The holding and dispensing apparatus

1 includes a holding device for holding the pack and a dispensing device  
2 for dispensing beverage from the pack.

3  
4 Other objects, advantages and novel features of the invention will become  
5 more apparent from the following detailed description in conjunction  
6 with the attached drawings.

7  
8 **Brief Description of Drawings**

9 The present invention will be described via detailed illustration of the  
10 preferred embodiment referring to the drawings.

11  
12 Figure 1 is an exploded view of a holding and dispensing apparatus  
13 according to the preferred embodiment of this invention.

14  
15 Figure 2 is a cross-sectional view of the holding and dispensing apparatus  
16 shown in Figure 1.

17  
18 Figure 3 is similar to Figure 2 but shows the holding and dispensing  
19 apparatus in another position.

20  
21 Figure 4 is similar to Figure 3 but shows the holding and dispensing  
22 apparatus in another position.

23  
24 Figure 5 is a cross-sectional view of the holding and dispensing apparatus  
25 shown in Figure 1 used with a pack shown in phantom lines.

1 Figure 6 is similar to Figure 1 but shows the holding and dispensing  
2 apparatus in another position.

3  
4 Figure 7 is a cross-sectional view of a conventional pack.

5  
6 **Detailed Description of Preferred Embodiment**

7 Referring to Figures 1-6, according to the preferred embodiment of the  
8 present invention, a holding and dispensing apparatus is provided for use  
9 with a pack 3. The holding and dispensing apparatus includes a holding  
10 device for holding the pack 3 and a dispensing device for dispensing  
11 beverage from the pack 3.

12  
13 The holding device includes a clamp 5 for clamping the pack 3 and a  
14 handle 70 attached to the clamp 5. The clamp 5 includes a first jaw 11  
15 for contact with the top of the pack 3 and a second jaw 61 for contact  
16 with the bottom of the pack 3. The first jaw 11 is connected with the  
17 second jaw 61 so that a distance between them is adjustable. Thus, the  
18 clamp 5 can clamp packs of different heights. The handle 70 is attached  
19 to a plate 62 extending from the second jaw 61. It is easier to grip the  
20 handle 70 than to hold the pack 3.

21  
22 A telescopic device is provided for connection the first jaw 11 with the  
23 second jaw 61 in the above-mentioned manner. The telescopic device  
24 includes a column 12 extending from the first jaw 11 and two rods 64  
25 extending into the column 12 from the second jaw 61. The column 12  
26 includes two tunnels 18 defined therein, a series of teeth 19 formed

1 thereon and a stop 34 formed thereon. The rods 64 extend from a base  
2 63 that is attached to the second jaw 61. On each of the rods 64 is  
3 mounted a compression spring 65. The rods 64 and the compression  
4 springs 65 are inserted in the tunnels 18. Thus, the first jaw 11 is  
5 connected with the second jaw 61 in a telescopic manner.

6  
7 The first jaw 10 includes two restraints 17 formed thereon for restraining  
8 the pack 3. Similarly, the second jaw 61 includes restraints 66 and 67  
9 formed thereon for restraining the pack 3. The base 63 includes a  
10 restraint for restraining the pack 3.

11  
12 A locking device 80 is used to lock the plate 62 to the column 12. The  
13 locking device 80 includes a tongue 83 for engagement with one of the  
14 teeth 19, a spring 82 for biasing the tongue 83 and a switch 81 for  
15 operating the tongue 83. The handle 70 is hollow for receiving the  
16 spring 82 and the tongue 83. In the preferred embodiment, the handle  
17 70 includes a first portion formed on the plate 62 and a second portion  
18 engaged with the first portion. The spring 82 and the tongue 83 are put  
19 in the handle 70 through an aperture (not numbered) defined in the plate  
20 62. The switch 81 is put in an aperture (not shown) defined in the  
21 tongue 83 through a slot (not numbered) defined in the handle 70 and,  
22 more particularly, in the second portion of the handle 70.

23  
24 The dispensing device includes a first piercing element 30 for piercing a  
25 first aperture in the top of the pack 3 and a second piercing element 31 for  
26 piecing a second aperture in the top of the pack 3. The beverage is

1 poured from the pack 3 through the first aperture. The air pressure  
2 outside and inside the pack 3 is balanced because of the second aperture.

3  
4 The first jaw 11 includes an aperture 14 defined therein for receiving the  
5 first piercing element 30, a second aperture 15 defined therein for  
6 receiving the second piercing element 31 and a corner shield 16 formed  
7 thereon for concealing the first piercing element 30.

8  
9 A cover 20 is used to cover the first piercing element 30 and the second  
10 piercing element 31. The first jaw 10 includes two pivots 13 formed  
11 thereon. The cover 20 includes two clips 21 for clamping the pivots 13  
12 so as to pivotally mount the cover 20 on the first jaw 10. A first seal 22  
13 is attached to the cover 20 in order to seal the first piercing element 30.  
14 A second seal 23 is attached to the cover 20 in order to seal the second  
15 piercing element 31. The cover 20 includes an extension 25. When the  
16 cover 20 is put on the first jaw 10, the extension 25 extends beyond the  
17 first jaw 10. Thus, the cover 20 can easily be lifted via manipulating the  
18 extension 25.

19  
20 A locking device 50 is used to lock the cover 20 to the first jaw 10. The  
21 first jaw 10 includes a slot 36 defined therein and a pivot 37 extending  
22 across the slot 36. The cover 20 defines a window 24 about which a  
23 reduced edge 26 is formed. The locking device 50 includes a lever 51  
24 put in the slot 36, a clip 53 for clamping the pivot 37, a hook 54 for  
25 hooking the reduced edge 26, a press portion 55 extending beyond the  
26 cover 20 and a torque spring 56 arranged between the first jaw 10 and the

1 lever 51.

2

3 A snap opening device 52 is used to snap open the cover 20 from the first  
4 jaw 10. The snap opening device 52 includes a spring 57 attached to the  
5 first jaw 10 and a sheath 58 mounted on the spring 57 in order to contact  
6 the cover 20.

7

8 Referring to Figure 2, the reduced edge 26 is hooked by means of the  
9 hook 54. Thus, the cover 20 is locked to the first jaw 10.

10

11 Referring to Figure 3, via pressing the press portion 55, the lever 51 is  
12 pivoted and so is the hook 54. Thus, the reduced edge 26 is released  
13 from the hook 54.

14

15 Referring to Figure 4, the cover 20 is snap opened from the first jaw 10  
16 by means of the snap opening device 52.

17

18 Referring to Figure 5, the beverage is poured from the pack 3.

19

20 Referring to Figure 6, via moving the switch 81, the tongue 83 is  
21 disengaged from the teeth 19. Thus, the first jaw 10 is movable from the  
22 second jaw 61.

23

24 The present invention has been described via detailed illustration of the  
25 preferred embodiment. Those skilled in the art can derive variations  
26 from the preferred embodiment without departing from the scope of the

1 present invention. Therefore, the preferred embodiment shall not limit  
2 the scope of the present invention defined in the claims.

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